### PROJECT DESCRIPTION

This project involves the modification of an existing mast arm Traffic Control Signal with street lighting and interconnect at the intersection of MD 150 (Eastern Blvd) and Marlyn Avenue in Baltimore County. The existing pedestrian signal heads shall be replaced by Countdown pedestrian signal heads with audible pushbuttons. MD 150 (Eastern Blvd) is assumed to run an east-west direction.

#### II. INTERSECTION OPERATION

GENERAL

- The intersection shall continue to operate in a NEMA six-phase, fully-actuated mode, with the MD 150 (Eastern Blvd) approaches running concurrently. Exclusive/Permissive left turn phases for both approaches of MD 150 (Eastern Blvd) shall remain in operation. The pedestrian phase with pushbutton actuation across the east leg of MD 150 (Eastern Blvd). shall now be a Countdown pedestrian signal phase with audible pushbutton actuation. The pedestrian phases across Marlyn Avenue shall now be a Countdown pedestrian signal phase with audible pushbuttons on recall. Farside sampling stations for the west leg of MD 150 (Eastern Blvd) shall remain in operation at this intersection. The Marlyn Avenue approaches shall continue to run as a side street split phase..
- The existing full-traffic-actuated, eight-phase controller with all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection.
- SHA signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the SHA Signal Shop for testing and programming.

#### III. SPECIAL NOTES

- 1. The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7652 seventy-two hours in advance of intended work.
- 3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- 4. APS will function as follows:

#### TO CROSS MD 150 (EASTERN BLVD)

- When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross Eastern
- When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

#### TO CROSS MARLYN AVENUE (NORTH )

- When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross North Marlyn at Eastern.
- When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

# TO CROSS MARLYN AVENUE (SOUTH)

- When pedestrian locates and presses the pushbutton for an extended time, the pushbutton unit will announce the following message "Wait to cross South Marlyn at Eastern.
- When the WALK phase begins, the pushbutton unit will provide a rapid tick which will last for the duration of the WALK phase.

# The contact persons for District #4 are as follows:

Ms. Erin Kuhn Assistant District Engineer – Traffic Phone: (410) 321–2781	Mr. Richard L. Daff, Sr. Chief, Traffic Operations Divisi Phone: (410) 787–7630

Mr. Sonny Bailey

Sign Shop

410-787-7676

Mr. Andre Futrell Mr. Ed Rodenhizer Assistant District Engineer - Maintenance Signal Shop Phone: (410) 321-2761 410-787-7652

Mr. Mike Pasquaiello Assistant District Engineer - Utility Phone: (410) 321-2841

# EQUIPMENT L'IST

# A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANT	ITY	
9570	Sheet aluminum signs to consist of: (ground mount)	6	SF	
	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS EASTERN BLVD").	2	EA	
。 () 称	Pedestrian education R10-4(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS MARLYN BLVD").	4	EA	\
9571	Sheet aluminum signs to consist of: (mast arm)	21	SF	
	D3-2 "N. Marlyn AVE (arrow)/ (arrow) N. Marlyn AVE" sign, (variable x 16") (dual Faced)	1	EA	
	D3-2 "S. Marlyn AVE (arrow)/ (arrow) S. Marlyn AVE" sign, (variable x 16") (dual Faced)	1	EA	•

### EQUIPMENT LIST (CONT.)

	EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR	)	
ITEM NO.	DESCRIPTION	QUAN	TITY
1001	Maintenance of traffic per assignment.	2	EA
2002	Test Pit Excavation	- 6	C.Y.
5002	12" white heat applied permanent preformed thermoplastic pavement marking.	480	L.F.
5003	24" white heat applied permanent preformed thermoplastic pavement marking.	150	L.F.
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	280	L.F.
6002	5" concrete sidewalk.	885	S.F.
8003	2 wire Central Control unit	1	EA
8009	Adjust existing handhole to grade.	1	EA
. 8010	Audible/tactile pedestrian pushbutton station & signs.	6	EA
8011	Breakaway Pedestal pole (5').	. 1	EA
8011	Breakaway Pedestal pole (10').	2	EA
8014	LED 16" countdown pedestrian signal head.	6	EA
8015	LED signal head modules (any size).	48	EA
8017	Remove and dispose of existing material and equipment per assignment.	. 1	EA
8028	Schedule 80 rigid PVC conduit up to 4" - trenched.	65	L.F.
8029	Detectable warning surfaces	80	S.F.
8034	No. 6 AWG stranded bare copper ground wire.	75	L.F.
8046	Install ground mounted sign.	6	S.F.
8047	Install overhead sign.	21	SF

8058 Electrical cable -

Electrical cable -

2 conductor (No. 14 AWG).

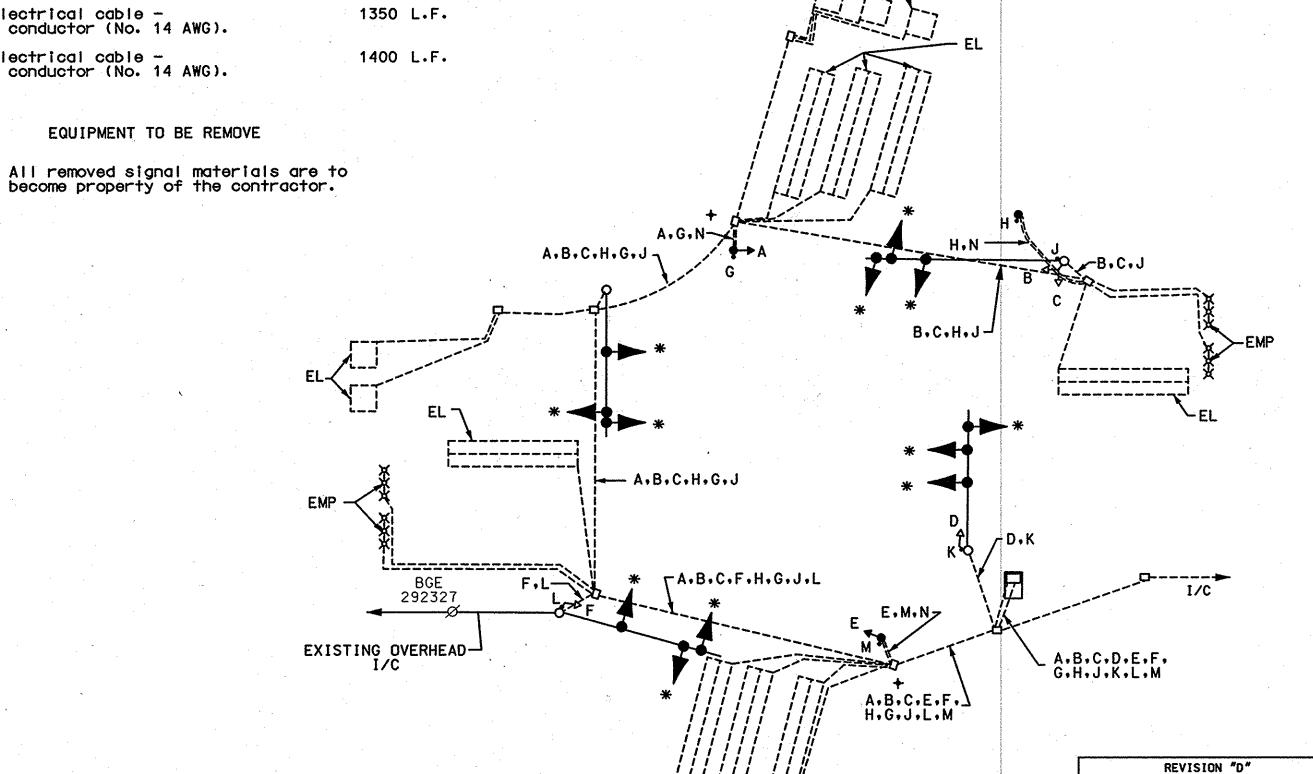
5 conductor (No. 14 AWG).

EQUIPMENT TO BE REMOVE

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CHANGES TO PHASES 1	& 6, 2	& 5 OI	R 2 & 6	Avaneiskandalave						I	<b></b>		I		<u> </u>				1
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1 & 6 CHANGE	<b>←</b> Y-/G	<b>4-</b> Y∕G	G	R	R	R	R	R	R	R	R	R	DW	WK	WK	DW	DW	DW	7
PHASE 2 & 5	R	R	R	<b>4</b> -G-/G	<b>4</b> G-/G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	DW	•
2 & 5 CHANGE	R	R	R	<b>4</b> -Y-/G	<b>4</b> -Y-/G	G	R	R	R	R	R	R	WK	DW	DW	WK	DW	D₩	
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	WK	WK	DW	D₩	,
PED CLEAR / COUNTDOWN	G	G	G	G	· G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	D₩	D₩	1
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	D₩	DW	D₩	DW	DW	Ť
PHASE 3	R	R	R	R	R	R	<u>G</u> <b>←</b> G−	<u>G</u> <b>←</b> G~-	G	R	R	R	D₩	DW	DW	DW	DW	D₩	T
3 CHANGE	R	R	R	R	R	R	Υ	Υ	Υ	R	R	R	DW	· DW	D₩	D₩	DW	DW	1
PHASE 4	R	R	R	R	R	R	R	R	R	<u>G</u> <b>4</b> -G−	<u>G</u> <b>←</b> G−	G <sub>.</sub>	DW	∙ D₩	DW	DW	DW	DW	+
4 CHANGE	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	D₩	DW	DW	DW	DW	
PHASE 3 ALT	R	R	R	R	R	R	<u>G</u> <b>4</b> -G−	<u>G</u> <b>←</b> G−	G	R	. R	R	DW	D₩	D₩	DW	WK	WK	1
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	<u>G</u> <b>←</b> G−	<u>G</u> <b>←</b> G−	G	R	R	R	D₩	D₩	D₩	D₩	FL/DW	FL/DW	1
PHASE 3 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	D₩	D₩	DW	DW	DW	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

WIRING DIAGRAM



TOD NO:XX448-02 SHA NO:BA838A52/B52 MD 150@ NORTH MARLYN/SOUTH MARLYN

WIRING KEY 5-CONDUCTOR ELECTRICAL

J 2-CONDUCTOR ELECTRICAL K CABLE (NO. 14 A.W.G )

CABLE (NO. 14 A.W.G )

N - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.) EMP-EXISTING MICROLOOP LEAD-IN

EL-LOOP WIRE (NO. 14 A.W.G.) EXISTING

\* - USE EXISTING CABLE

+ - GROUND ROD

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

MD 150 (EASTERN BLVD) AND MARLYN AVENUE

ESSEX, MAYLAND

GENERAL INFORMATION SHEET DATE 4/16/08 CONTRACT NO. XX4485185 DESIGNED BY STREET TRAFFIC STUDIES, LTD.

CHECKED BY Walan

TS NO. 3017D DRAWING NO. 2 OF 2

BALTIMORE 03015003.88 TIMS NO. \_\_\_\_1555 TOD NO.

SHEET NO.

5402G1.DGN

400 Crain Hwy., N.W. Glen Burnie, MD 21061

Ph (410) 590-5500 Fax (410) 590-6637